

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In Re the Application of:

Robert W. Warren, Jr.

Serial No.: 10/767,505

Filed: January 28, 2004

Atty. Docket No.: STL11661/
390-009-USP

For: METHOD AND SYSTEM FOR
GENERIC DATA TRANSFER
INTERFACE

Group Art Unit: 2181

Confirmation No.: 5517

Examiner: Martinez, David E.

APPELLANT'S APPEAL BRIEF
UNDER 37 C.F.R. § 41.37

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Pursuant to the Appellant's earlier filed Notice of Appeal, the Appellant appealed the Examiner's December 12, 2007 Office Action finally rejecting claims 1-25. Appellant's Brief is submitted herewith. This Appeal Brief is believed to be fully compliant with 37 C.F.R. § 41.37.

TABLE OF CONTENTS

I.	Real Party in Interest (37 CFR §41.37(c)(1)(i)).....	4
II.	Related Appeals and Interferences (37 CFR §41.37(c)(1)(ii)).....	4
III.	Status of Claimed Subject Matter (37 CFR §41.37(c)(1)(iii)).....	4
IV.	Status of Amendments (37 CFR §41.37(c)(1)(iv)).....	4
V.	Summary of Claimed Subject Matter (37 CFR §41.37(c)(1)(v)).....	5
VI.	Issues to be Reviewed on Appeal (37 CFR §41.37(c)(1)(vi)).....	6
VII.	Argument (37 CFR §41.37(c)(1)(vii)).....	7
A. Rejection of claims 1-4, 7-10, 13-18, and 21-25 as anticipated by Iguchi under 35 U.S.C. §102(b)		7
1.	Iguchi fails to disclose that “the host interface will communicate over a data bus with the media controller” and “a connection for address-less transfer between the indicated virtual channel of the host interface and a corresponding virtual channel of the media controller,” as recited in independent claim 1	7
2.	Iguchi fails to disclose “a media controller comprising a channel select bit decoder that decodes one or more channel select bits received from a host interface indicating one of a plurality of virtual channels through which the host interface will communicate over a data bus with the media controller” and “a virtual channel controller coupled to the channel select bit decoder that decodes the one or more channel select bits and establishes a connection for address-less transfer between the indicated virtual channel of the host interface and a corresponding virtual channel of the media controller selected based on the one or more decoded channel select bits” as recited in independent claim 7	10
3.	Iguchi fails to disclose that “the host interface will communicate over a data bus with the media controller” and “connection for address-less transfer between the indicated virtual channel of the host interface and a corresponding virtual channel of the media controller,” as recited in independent claim 15.....	12
B. Rejection of claims 5, 11, and 19 as unpatentable under 35 U.S.C. §103(a) over Iguchi in view of Sardo.....		14
C. Rejection of claims 6, 12, and 20 as unpatentable under 35 U.S.C. §103(a) over Iguchi in view of Hewitt.....		14

D. Conclusion.....	15
VIII. Claims Appendix (37 CFR §41.37(c)(1)(viii)).....	16
IX. Evidence Appendix (37 CFR §41.37(c)(1)(ix)).....	22
X. Related Proceedings Appendix (37 CFR §41.37(c)(1)(x)).....	23

I. Real Party In Interest (37 CFR §41.37(c)(1)(i))

The real party in interest in this appeal is:

Seagate Technology, LLC
920 Disc Drive
Scotts Valley, California 95066

II. Related Appeals And Interferences (37 CFR §41.37(c)(1)(ii))

No other appeals or interferences are currently known to Appellant that will directly affect, be directly affected by, or have a bearing on the decision to be rendered by the Board of Patent Appeals and Interferences in the present appeal.

III. Status Of Claimed Subject Matter (37 CFR §41.37(c)(1)(iii))

Claims 1, 7, and 15 are independent claims. Claims 2-6, 8-14, and 16-25 are dependent claims.

In view of the Final Office Action mailed December 12, 2007, claims 1-25 stand finally rejected and are the subject of this appeal.

IV. Status of Amendments (37 CFR §41.37(c)(1)(iv))

The Office advised the Appellant in the Advisory Action mailed March 17, 2008 that the amendments filed in Appellant's response to the Final Office Action mailed December 12, 2007 will not be entered for purposes of appeal because they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal. However, Appellants note that no claim amendments were made in the Response to Final Office Action filed February 12, 2008. No amendments have been filed since the Response to the Final Office Action filed, with a Request for Continued Examination, on November 27, 2006. All amendments filed were previously entered.

V. Summary of Claimed Subject Matter (37 CFR §41.37 (c)(1)(v))

Independent claim 1 is directed to a host interface. *See, e.g.*, Specification at p. 2, lines 8-10 and FIG. 3. The host interface comprises a channel select bit encoder that asserts to a media controller one or more channel select bits. *See, e.g.*, Specification at p. 2, line 10 and FIG. 3. The channel select bits indicate one of a plurality of virtual channels through which the host interface will communicate over a data bus with the media controller. *See, e.g.*, Specification at p. 2, lines 10-11 and FIG. 3. Additionally, the host interface comprises a virtual channel controller coupled to the channel select bit encoder that establishes a connection for address-less transfer between the indicated virtual channel of the host interface and a corresponding virtual channel of the media controller. *See, e.g.*, Specification at p. 2, lines 12-14, p. 7, lines 5-8, and FIG. 3.

Independent claim 7 is directed to a media controller. *See, e.g.*, Specification at p. 2, lines 17-18 and FIG. 3. The media controller comprises a channel select bit decoder that decodes one or more channel select bits received from a host interface. *See, e.g.*, Specification at p. 2, lines 18-19 and FIG. 3. The channel select bits indicate one of a plurality of virtual channels through which the host interface will communicate over a data bus with the media controller. *See, e.g.*, Specification at p. 2, lines 19-20 and FIG. 3. Additionally, the media controller comprises a virtual channel controller coupled to the channel select bit decoder that decodes the one or more channel select bits and establishes a connection for address-less transfer between the indicated virtual channel of the host interface and a corresponding virtual channel of the media controller selected based on the one or more decoded channel select bits. *See, e.g.*, Specification at p. 2, lines 20-23, p. 7, lines 5-8, and FIG. 3.

Independent claim 15 is directed to a data storage device. *See, e.g.*, Specification at p. 2, lines 24-26 and FIG. 3. The data storage device comprises a host interface and a media controller. *See, e.g.*, Specification at p. 2, lines 25-27 and FIG. 3. In addition, the host interface comprises a channel select bit encoder that asserts one or more channel select bits. *See, e.g.*, Specification at p. 2, lines 26-27 and FIG. 3. Also, the channel select bits indicate one of a plurality of virtual channels through which the host interface will communicate over a data bus. *See, e.g.*, Specification at p. 2, lines 27-28 and FIG. 3. Further, the media controller comprises a channel select bit decoder that decodes one or more channel select bits received from the host interface. *See, e.g.*, Specification at p. 3, lines 3-4 and FIG. 3. Also, the media controller comprises a virtual channel controller coupled to the channel select bit decoder that establishes a connection for address-less transfer between the indicated virtual channel of the host interface and a corresponding virtual channel of the media controller selected based on the one or more decoded channel select bits. *See, e.g.*, Specification at page 3, lines 4-7, page 7, lines 5-8, and FIG. 3.

VI. Issues To Be Reviewed On Appeal (37 CFR § 41.37(c)(1)(vi))

The issues for review are whether claims 1-4, 7-10, 13-18, and 21-25 are anticipated by U.S. Patent Application Publication No. 2002/0169960 to Iguchi et al. (“Iguchi”) under 35 U.S.C. § 102(b); whether claims 5, 11, and 19 are unpatentable under 35 U.S.C. § 103(a) over Iguchi in view of U.S. Patent No. 6,763,405 to Sardo et al. (“Sardo”); and whether claims 6, 12, and 20 are unpatentable under 35 U.S.C. § 103(a) over Iguchi in view of U.S. Patent No. 5,790,811 to Hewitt (“Hewitt”).

VII. Argument (37 CFR §41.37(c)(1)(vii))

A. Rejection of claims 1-4, 7-10, 13-18, and 21-25 as anticipated by Iguchi under 35 U.S.C. § 102(b)

At page 2 of the Final Office Action mailed December 12, 2007, the Office rejected claims 1-4, 7-10, 13-18, and 21-25 as being anticipated under U.S.C. § 102(b) by Iguchi. All rejections are respectfully traversed.

Appellant respectfully submits that the Office has erred by failing to provide evidence that each and every element of the claims exists in Iguchi. As a general matter, “A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

1. Iguchi fails to disclose that “the host interface will communicate over a data bus with the media controller” and “a connection for address-less transfer between the indicated virtual channel of the host interface and a corresponding virtual channel of the media controller,” as recited in independent claim 1.

At page 2 of the Final Office Action mailed December 12, 2007, the Examiner asserts that Iguchi teaches, *inter alia*, that “the host interface will communicate over a data bus with the media controller” and the establishment of “a connection for address-less transfer between the indicated virtual channel of the host interface and a corresponding virtual channel of the media controller,” as recited in independent claim 1. The Examiner cites generally Iguchi at paragraphs 90 and 119, as well as FIGS. 13 and 17 in rejecting claim 1. Appellant, however, respectfully disagrees.

Referring to FIG. 2 of the present application, the interface 144 comprises the host interface and the media controller, which are shown in FIG. 3 of the present application. Thus,

the connection established between the host interface and the media controller is within Interface 144 of the storage device shown in FIG. 2 of the present application.

At page 2 of the Final Office Action mailed December 12, 2007, the Examiner asserts that “a channel select bit encode exists inside element 120 which selects the virtual channel to be used for communication to take place” and that “a virtual channel controller exists inside element 120 which is used for establishing a connection with element 103 via a corresponding virtual channel.” The Examiner, however, fails to provide any explicit support for the assertion that Iguchi discloses that “the host interface will communicate over a data bus with the media controller” or that “a connection for address-less transfer between the indicated virtual channel of the host interface and a corresponding virtual channel of the media controller” is established, as recited in independent claim 1.

Paragraphs 90 and 119 of Iguchi explicitly teach that a virtual communications path is established between the mobile terminal 103 and the storage device 120. More specifically, paragraph 119 teaches that the virtual communications path is established between decoder 206 of mobile terminal 103 and the storage device 120. FIG. 2 of Iguchi clearly discloses that the host interface 122 of the storage device 122 is connected with the mobile terminal 103. Absent from Iguchi is any disclosure or suggestion of a connection between a host interface and a media controller, as recited in independent claim 1.

Appellants note that the Examiner has explicitly referred to both a component of mobile terminal 103 and the storage device 120 as a “media controller.” At page 3 of the Final Office Action, the Examiner alleges that Iguchi teaches a media controller and cites element 103 (the mobile terminal), as shown in FIG. 17, as the media controller. Specifically, at numbered item 5, the Examiner alleges that the media controller is “inside element 103.” However, in the

Advisory Action mailed March 17, 2008, the Examiner appears to change his position, equating the media controller with storage device 120 of Iguchi and stating “storage being made of media.” The media controller cannot be within both element 103 and storage device 120.

In contrast to the Examiner’s most recent assertion, Appellant respectfully submits that storage device 120 of Iguchi is not a media controller. Rather, as shown in FIG. 2 of Iguchi, the communications path is established between the mobile terminal 103 and the host interface 122 of storage device 120. Iguchi fails to disclose or suggest any communications pathway between a host interface and a media controller, as recited in independent claim 1.

Additionally, in the Advisory Action mailed March 17, 2008, the Office states that “As per Applicant own admission, ‘Iguchi creates a virtual communications-path between the decoder circuit in the mobile terminal (the host 103) and the storage device 120’, and thus it being a connection between a host (the mobile terminal 103) and a media controller (storage device 120 – storage being made of media).” Appellant respectfully disagrees with the Examiner’s characterization of Appellant’s arguments and again submits that the storage device 120, specifically host interface 122, is not a media controller.

For at least these reasons, Appellant respectfully submits that Iguchi fails to anticipate independent claim 1 and those claims depending directly or indirectly therefrom. Reconsideration and withdrawal of the rejection of independent claim 1, and those claims depending directly or indirectly therefrom, and allowance of these claims is respectfully requested.

2. Iguchi fails to disclose “a media controller comprising a channel select bit decoder that decodes one or more channel select bits received from a host interface indicating one of a plurality of virtual channels through which the host interface will communicate over a data bus with the media controller” and “a virtual channel controller coupled to the channel select bit decoder that decodes the one or more channel select bits and establishes a connection for address-less transfer between the indicated virtual channel of the host interface and a corresponding virtual channel of the media controller selected based on the one or more decoded channel select bits” as recited in independent claim 7.

At pages 3 to 4 of the Final Office Action, the Office contends that Iguchi teaches a media controller comprising a channel select bit decoder that decodes one or more channel select bits received from a host interface indicating one of a plurality of virtual channels through which the host interface will communicate over a data bus with the media controller, as recited in independent claim 7. The Office cites Iguchi at paragraphs 90 and 119 and FIGS. 13 and 17 in support of this contention. Appellant, however, respectfully disagrees.

Independent claim 7 recites, *inter alia*, a media controller that includes a channel select bit decoder **and** a virtual channel controller. At page 3 of the Final Office Action mailed December 12, 2007, the Examiner appears to the media controller of independent 7 with an element “inside element 103” of Iguchi. Appellant notes that this interpretation of the media controller is inconsistent with the Examiner’s interpretation of the media controller in the Advisory Action mailed March 17, 2008. In the Advisory Action, the Examiner explicitly stated that storage device 120 is a media controller. At page 4 of the Final Office Action, the Examiner appears to equate decoder 206 of Iguchi with a channel select bit decoder. The decoder 206 of Iguchi is inside of mobile terminal 103. The Examiner also appears to equate the virtual channel controller that “exists inside storage device element 120 which is used for establishing a connection with element 103.” Thus, Iguchi explicitly teaches that the channel select bit decoder and the virtual channel controller exist within separate components. The channel select bit

decoder of Iguchi exists within the alleged “media controller” and the virtual channel controller exists within the storage device element 120, rather than the alleged media controller.

Independent claim 7, in contrast, recites that a media controller comprises both the channel select bit decoder and the virtual channel controller. Accordingly, Iguchi does not anticipate independent claim 7.

Further, as noted above with respect to independent claim 1, the Examiner’s interpretation of the “media controller” and “host interface” has varied throughout prosecution. The Examiner’s most recent characterization of storage device 120 as the “media controller” is inconsistent with the characterization of Iguchi applied in the Final Office Action.

Additionally, Appellant notes that, as discussed with respect to independent claim 1, FIG. 2 of Iguchi clearly illustrates that the communications path is established between the mobile terminal 103 and the host interface 122 of storage device 120. Thus, Iguchi fails to disclose or suggest any communications pathway between a host interface and a media controller (alleged to be part of storage device 120), as recited in independent claim 7.

For at least these reasons, Appellant respectfully submits that Iguchi fails to anticipate independent claim 7 and those claims depending directly or indirectly therefrom.

Reconsideration and withdrawal of the rejection of independent claim 7, and those claims depending directly or indirectly therefrom, and allowance of these claims is respectfully requested.

3. Iguchi fails to disclose that “the host interface will communicate over a data bus with the media controller” and “a connection for addressless transfer between the indicated virtual channel of the host interface and a corresponding virtual channel of the media controller as recited in independent claim 15.

At page 6 of the Final Office Action, the Examiner contends that Iguchi teaches a data storage device comprising a host interface comprising a channel select bit encoder that asserts one or more channel select bits indicating one of a plurality of virtual channels through which the host interface will communicate over a data bus, as recited in independent claim 15. The Examiner stated that claim 15 recites similar features to claims 1 and 7, and rejects it under the same rationale. The Examiner generally cites Iguchi at paragraphs 90 and 119 and FIGS. 13 and 17 in support of the rejection in claims 1 and 7. Appellant, however, respectfully disagrees.

Referring to FIG. 2 of the present application, the interface 144 comprises the host interface and the media controller, which are shown in FIG. 3 of the present application. Thus, the connection established between the host interface and the media controller is within Interface 144 of the storage device shown in FIG. 2 of the present application.

Paragraphs 90 and 119 of Iguchi explicitly teach that a virtual communications path is established between the mobile terminal 103 and the storage device 120. More specifically, paragraph 119 teaches that the virtual communications path is established between decoder 206 of mobile terminal 103 and the storage device 120. FIG. 2 of Iguchi clearly discloses that the host interface 122 of the storage device 122 is connected with the mobile terminal 103. Absent from Iguchi is any disclosure or suggestion of a connection between a host interface and a media controller, as recited in independent claim 15.

Appellants note that the Examiner has explicitly referred to both a component of mobile terminal 103 and the storage device 120 as a “media controller.” At page 3 of the Final Office Action, the Examiner alleges that Iguchi teaches a media controller and cites element 103 (the Application No.: 10/767,505
Appeal Brief
Attorney Docket No.: STL11661/390-009-USP

mobile terminal), as shown in FIG. 17, as the media controller. Specifically, at numbered item 5, the Examiner alleges that the media controller is “inside element 103.” However, in the Advisory Action mailed March 17, 2008, the Examiner appears to change his position, equating the media controller with storage device 120 of Iguchi and stating “storage being made of media.” The media controller cannot be within both element 103 and storage device 120.

In contrast to the Examiner’s most recent assertion, Appellant respectfully submits that storage device 120 of Iguchi is not a media controller. Rather, as shown in FIG. 2 of Iguchi, the communications path is established between the mobile terminal 103 and the host interface 122 of storage device 120. Iguchi fails to disclose or suggest any communications pathway between a host interface and a media controller, as recited in independent claim 15.

Additionally, in the Advisory Action mailed March 17, 2008, the Office states that “As per Applicant own admission, ‘Iguchi creates a virtual communications-path between the decoder circuit in the mobile terminal (the host 103) and the storage device 120’, and thus it being a connection between a host (the mobile terminal 103) and a media controller (storage device 120 – storage being made of media).” Appellant respectfully disagrees with the Examiner’s characterization of Appellant’s arguments and again submits that the storage device 120, specifically host interface 122, is not a media controller.

For at least these reasons, Appellant respectfully submits that Iguchi fails to anticipate independent claim 15 and those claims depending directly or indirectly therefrom. Reconsideration and withdrawal of the rejection of independent claim 15, and those claims depending directly or indirectly therefrom, and allowance of these claims is respectfully requested.

B. Rejection of claims 5, 11, and 19 as unpatentable under 35 U.S.C. § 103(a) over Iguchi in view of Sardo

On page 7 of the Final Office Action mailed December 12, 2007, the Office rejected claims 5, 11, and 19 as being unpatentable under 35 U.S.C. § 103(a) over Iguchi in Sardo. Appellant respectfully submits that claims 5, 11, and 19 depend, directly or indirectly, from independent claims 1, 7, and 15. As discussed above in section VII.A, above, Iguchi does not anticipate claim 1, claim 7, or claim 15. Sardo is relied upon only to teach transmitting packets synchronously with a clock in the host controller to a peripheral for the benefit of maximizing transmission throughput to the peripheral, and does not cure the deficiencies of Iguchi set forth above. Accordingly, Iguchi and Sardo, whether taken alone or in combination, do not teach or suggest all of the features of dependent claims 5, 11, and 19. Thus, there is not a *prima facie* case for obviousness with respect to dependent claims 5, 11, and 19. For at least these reasons, Appellant respectfully submits that dependent claims 5, 11, and 19 patentably distinguish over the cited art. Reconsideration and withdrawal of the rejection of dependent claims 5, 11, and 19, and allowance of claims 5, 11, and 19 are respectfully requested.

C. Rejection of claims 6, 12, and 20 as unpatentable under 35 U.S.C. § 103(a) over Iguchi in view of Hewitt

At page 8 of the Final Office Action mailed December 12, 2007, the Office rejected claims 6, 12, and 20 as being unpatentable under 35 U.S.C. § 103(a) over Iguchi in view Hewitt. Appellant respectfully submits that claims 6, 12, and 20 depend, directly or indirectly, from independent claims 1, 7, and 15. As discussed above in section VII.A, above, Iguchi does not anticipate claim 1, claim 7, or claim 15. Hewitt is relied upon only to teach a quadrature handshake model, and does not cure the deficiencies of Iguchi set forth above. Accordingly, Iguchi and Hewitt, whether taken alone or in combination, do not teach or suggest all of the

features of dependent claims 6, 12, and 20. Thus, there is not a *prima facie* case for obviousness with respect to dependent claims 6, 12, and 20. For at least these reasons, Appellant respectfully submits that dependent claims 6, 12, and 20 patentably distinguish over the cited art.

Reconsideration and withdrawal of the rejection of dependent claims 6, 12, and 20, and allowance of claims 6, 12, and 20 are respectfully requested.

D. Conclusion

In view of the law and facts stated herein, Appellant respectfully submits that the reasoning and the references cited by the Office are insufficient to maintain anticipation and obviousness rejections of the claims. Appellant respectfully urges that the rejection of claims 1-25 under 35 U.S.C. § 102(b) or U.S.C. § 103(a) is improper. Reversal of the rejections in this application is respectfully requested.

A representative from the U.S. Patent and Trademark Office is invited to contact the undersigned at the below-listed telephone number regarding any matters relating to the present application.

Date: 7 July 2008

Respectfully submitted,

/Allison Olenginski/

Allison Olenginski
Registration No. 55,509
Hensley Kim & Holzer, LLC
1660 Lincoln Street, Suite 3000
Denver, CO 80264
(720) 377-0773

VIII. Claims Appendix

1. (previously presented) A host interface comprising:
 - a channel select bit encoder that asserts to a media controller one or more channel select bits indicating one of a plurality of virtual channels through which the host interface will communicate over a data bus with the media controller;
 - a virtual channel controller coupled to the channel select bit encoder that establishes a connection for address-less transfer between the indicated virtual channel of the host interface and a corresponding virtual channel of the media controller.
2. (previously presented) The host interface of claim 1, wherein the connection is a peer-to-peer connection and the indicated virtual channel of the host interface and the corresponding virtual channel of the media controller are used to establish the peer-to-peer connection to transfer data between the host interface and the media controller.
3. (previously presented) The host interface of claim 1, wherein the connection is a peer-to-peer connection and the indicated virtual channel of the host interface and the corresponding virtual channel of the media controller are used to establish the peer-to-peer connection to transfer control signals between the host interface and the media controller.
4. (previously presented) The host interface of claim 1, wherein the connection is a peer-to-peer connection and the indicated virtual channel of the host interface and the corresponding virtual channel of the media controller are used to establish the peer-to-peer connection to transfer side band information between the host interface and the media controller.

5. (previously presented) The host interface of claim 23, wherein the communication controller transfers data to and from the media controller synchronous with a clock in the host controller.

6. (previously presented) The host interface of claim 23, wherein the communication controller transfers data to and from the media controller based on a quadrature handshake model.

7. (previously presented) A media controller comprising:
a channel select bit decoder that decodes one or more channel select bits received from a host interface indicating one of a plurality of virtual channels through which the host interface will communicate over a data bus with the media controller;
a virtual channel controller coupled to the channel select bit decoder that decodes the one or more channel select bits and establishes a connection for address-less transfer between the indicated virtual channel of the host interface and a corresponding virtual channel of the media controller selected based on the one or more decoded channel select bits.

8. (previously presented) The media controller of claim 7, wherein the connection is a peer-to-peer connection and the indicated virtual channel of the host interface and the corresponding virtual channel of the media controller are used to establish the peer-to-peer connection to transfer data between the host interface and the media controller.

9. (previously presented) The media controller of claim 7, wherein the connection is a peer-to-peer connection and the indicated virtual channel of the host interface and the corresponding virtual channel of the media controller are used to establish the peer-to-peer connection to transfer control signals between the host interface and the media controller.

10. (previously presented) The media controller of claim 7, wherein the connection is a peer-to-peer connection and the indicated virtual channel of the host interface and the corresponding virtual channel of the media controller are used to establish the peer-to-peer connection to transfer side band information between the host interface and the media controller.

11. (previously presented) The media controller of claim 24, wherein the communication controller transfers data to and from the host interface synchronous with a clock in the host interface.

12. (previously presented) The media controller of claim 24, wherein the communication controller transfers data to and from the host interface based on a quadrature handshake model.

13. (previously presented) The media controller of claim 7, wherein the connection is a peer-to-peer connection and the media controller limits access to a storage medium of a data storage device through the peer-to-peer connection.

14. (previously presented) The media controller of claim 13, wherein the media controller limits access to the storage medium based on one or more registers relating to each of the virtual channels of the media controller, the registers indicating a range of addresses on the storage medium that may be accessed via the related virtual channel of the media controller.

15. (previously presented) A data storage device comprising:

a host interface comprising a channel select bit encoder that asserts one or more channel select bits indicating one of a plurality of virtual channels through which the host interface will communicate over a data bus; and

a media controller comprising a channel select bit decoder that decodes the one or more channel select bits received from the host interface and a virtual channel controller coupled to the channel select bit decoder that establishes a connection for address-less transfer between the indicated virtual channel of the host interface and a corresponding virtual channel of the media controller selected based on the one or more decoded channel select bits.

16. (previously presented) The data storage device of claim 15, wherein the connection is a peer-to-peer connection and the indicated virtual channel of the host interface and the corresponding virtual channel of the media controller are used to establish the peer-to-peer connection to transfer data between the host interface and the media controller.

17. (previously presented) The data storage device of claim 15, wherein the connection is a peer-to-peer connection and the indicated virtual channel of the host interface and the corresponding virtual channel of the media controller are used to establish the peer-to-peer connection to transfer control signals between the host interface and the media controller.

18. (previously presented) The data storage device of claim 15, wherein the connection is a peer-to-peer connection and the indicated virtual channel of the host interface and the corresponding virtual channel of the media controller are used to establish the peer-to-peer connection to transfer side band information between the host interface and the media controller.

19. (previously presented) The data storage device of claim 25, wherein the communication controller of the host interface transfers data to and from the media controller synchronous with a clock in the host controller.

20. (previously presented) The data storage device of claim 25, wherein the communication controller of the host interface transfers data to and from the media controller based on a quadrature handshake model.

21. (previously presented) The data storage device of claim 15, wherein the connection is a peer-to-peer connection and the media controller limits access to a storage medium of the data storage device through the peer-to-peer connection.

22. (previously presented) The data storage device of claim 21, wherein the media controller limits access to the storage medium based on one or more registers relating to each of the virtual channels of the media controller, the registers indicating a range of addresses on the storage medium that may be accessed via the related virtual channel of the media controller.

23. (previously presented) The host interface of claim 1 further comprising:
a communication controller that transfers data between the host interface and the media controller via address-less transfer.

24. (previously presented) The media controller of claim 7 further comprising:
a communication controller that transfers data between the host interface and the media controller via address-less transfer.

25. (previously presented) The data storage device of claim 15 wherein the host interface further comprises:

a communication controller that transfers data between the host interface and the media controller via address-less transfer.

IX. Evidence Appendix

None

X. Related Proceedings Appendix

None